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The University of Southern Mississippi

AN ANALYSIS OF THE CAREER MATURITY LEVELS

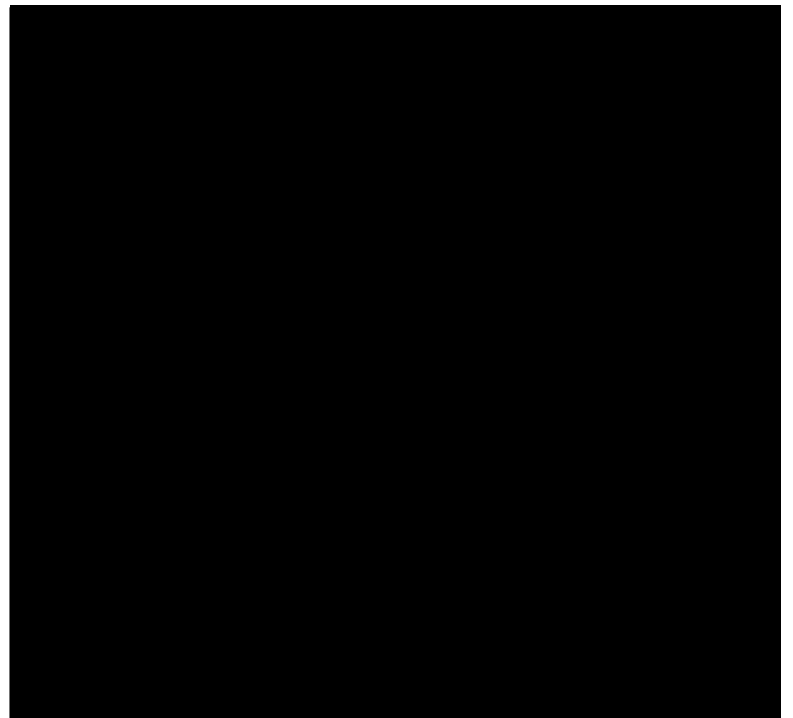
OF INTELLECTUALLY GIFTED ADOLESCENTS

by

Yolanda Yvette Baker Cobb

A Dissertation
Submitted to the Graduate Studies Office
of The University of Southern Mississippi
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy

Approved:



May 2008

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The University of Southern Mississippi

AN ANALYSIS OF THE CAREER MATURITY LEVELS
OF INTELLECTUALLY GIFTED ADOLESCENTS

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Yolanda Yvette Baker Cobb

Abstract of a Dissertation
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ABSTRACT

AN ANALYSIS OF THE CAREER MATURITY LEVELS
OF INTELLECTUALLY GIFTED ADOLESCENTS

by Yolanda Yvette Baker Cobb

May 2008

This research project was conducted to analyze the career maturity level scores of intellectually gifted middle school students. The Career Maturity Inventory-Revised (Crites & Savickas, 1995) was used to compare the career-choice readiness of the intellectually gifted students to their typical middle school-age peers, as well as to the 9th through 12th graders in the norm sample. In addition, a comparison of the career maturity levels of intellectually gifted male and female 6th and 7th graders was also conducted. It was also hypothesized that the intellectually gifted students' career maturity score would increase as the students' grade level increased. T-tests and a two-way ANOVA were used for data analysis. The findings indicate that intellectually gifted students have more mature attitudes toward career decision-making than their typical peers but not more so than the high school students in the norm sample. Differences were also found between the level of readiness of the male and female intellectually gifted students. There were, however, no differences found between the 6th and 7th grade intellectually gifted participants. A summary of findings and recommendations for future research and practice are also included.

DEDICATION

This dissertation is dedicated to my mother, Mrs. Leola Trigg Baker for her strength and wisdom and for her tireless efforts to encourage me to reach every goal I set for myself. Thank you, Mama.

ACKNOWLEDGEMENTS

I would like to thank God for providing me with the opportunity to matriculate through this program and acquire this doctoral degree. Without God's strength to overcome obstacles and peace to know that He would bring me through victoriously, I would not have succeeded.

I would also like to thank Dr. Frances A. Karnes, my advisor, for her guidance and patience. I have gained a wealth of knowledge about the field of gifted education and about the needs of the gifted children with whom I will be charged to educate. I do appreciate the many tasks that were designed to broaden my awareness of the field, and I believe that I have been thoroughly prepared to enlighten others as well.

In addition, I would like to recognize the other professors that have assisted me throughout this program. Those include Dr. Mary Nell McNeese, Dr. Jim Whorton, Dr. James Siders, and Dr. Sheila Alber. My dissertation committee that includes Dr. J.T. Johnson, Dr. Hollie Filce, Dr. Elgen Hillman, and Dr. David Walker also deserve a great deal of thanks.

Support and encouragement were two key factors that enabled me to endure. I was never without either of these because they were always provided by my friends and family members. I would like to thank Vickie Curry, Priscilla Smith, Amy Bisland, and Kevin Besnoy for their unwavering support as we worked through our classes together. They have been great friends to rely on. In addition, I have been fortunate enough to work with many others that have offered support at work as well. Many thanks are extended to Dr. Catherine Pentacost, Dr. Rosie Payton, Dr. Martha Dow, Rev. Evelyn Murphy, Mrs. Tracy Williams, and Mrs. Carrie Hornsby.

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To my loving husband, Malcolm Cobb and my sweet daughter, Carrington Jalice Cobb, you both are the sun that brightens my day. You two make it so easy to approach every new day. I cannot thank you enough for always being there to say, "Just tell me what you need, and I will do it for you" and "You can do it, Mommy!" Thank you, from the bottom of my heart for all that you do for me. I am what I am because of you.

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CHAPTER I

INTRODUCTION

Intellectually gifted students often exhibit outstanding abilities in a variety of subject areas. They are frequently described as multitalented or multipotential. Multipotentiality, simply put, means that their abilities enable them to succeed in more than one field (Gassin , Kelly & Feldhusen, 1993; Higgins & Boone, 2003; Kerr, 1990; Silverman, 1993). Although multipotentiality may seem to be a positive characteristic, it can prove to be a complexity for gifted students when it comes to making a career choice. Because of this, it is important for students in this population to explore possible careers early (Akos, 2004; Higgins & Boone, 2003; Kerr, 1990). Intellectually gifted students often work above the performance level of their peers and are equipped with a basic knowledge of careers (U.S. Department of Education, 1994). More in-depth information and advanced preparation is necessary to broaden the knowledge base of these students to a level at which they may begin to make grounded decisions about career interests and selections.

The growth and development of gifted youth has been described as asynchronous (The Columbus Group, 1991). This means that the students' intellect may be above or below that of their social skills, motor skills, or their mindset, when compared to that of their same-age peers. Considering this, it is reasonable to assume that gifted students may be intellectually-able to make career choices, because often they already have a basic understanding of many career fields prior to exposure to a career development program. This knowledge base is developed as students consciously and unconsciously gather information as they visit various locations, such as doctors' offices, schools, or

participate in field trips, and even watch television shows in which actors portray characters in different career roles.

The focus from many adults' perspective is on the rapidly changing physical and emotional states of adolescents. Middle school-age students are at the crux of finding their identities and developing their personalities. However, upon entering middle school, students are at the exploratory phase of career development (Akos, 2004; Berger, 1990). During this stage, students begin to gather more specific information about various fields. Middle school students are often underestimated for their ability to make accurate and age-appropriate career decisions (Roeper, 1995).

A parental example of this concept is evidenced in a comparative study of the career choices of gifted and typical females and their mothers (Hay & Bakken, 1991). The study consisted of 140 participants, 36 gifted girls, 34 non-gifted girls, and the mothers of the participants in both groups. The purpose was to analyze the career choices of the girls and their mothers. There were significant differences found between non-gifted girls and their mothers, whereas, the career selections of gifted females and their mothers were almost identical. The extent to which gifted and non-gifted girls differ was an unforeseen finding. Researchers noted that gifted girls preferred gender equity in education, dating, and marriage. Their non-gifted peers, on the other hand, tended to prefer more traditional roles. This finding was in opposition of Gilligan's (as cited in Winkler, 1990) work that theorized that attitudinal changes were age-related and developmental.

Schwartz (2005) cautions that by the time many students reach the adolescent stage, they have already limited their career aspirations. This is due to false information

and beliefs, such as perceived gender roles in career choices. This problem can be remedied with an appropriate well-planned career education program. A comprehensive program provides vocational information without necessarily focusing on training for a specific career field (Schwartz, 2005). Students will not only learn about the large spectrum of career choices, but also about living and working in a diverse world and the process for selecting a career based on their interests and abilities.

Purpose of the Study

The purpose of the study was to examine the career maturity levels of intellectually gifted middle school students, specifically grades 6 and 7. A comparison of the career choice readiness of intellectually gifted middle school students to that of their typical middle school age peers was analyzed. In addition, the career maturity level scores of the high school students, grades 9 through 12, in the norm sample of the assessment instrument was compared to that of the intellectually gifted middle school students in the research sample population. An examination of gender differences within the intellectually gifted groups was also conducted. Lastly, the researcher analyzed the results of both groups of participants to determine if the career maturity level increased as students matriculated from one grade to the next.

Research Hypotheses

The following hypotheses were tested in this study:

H1: The intellectually gifted students have higher career maturity level scores than those of their typical middle school age peers.

H2: The career maturity level scores of the middle school intellectually gifted students are at or above those of high school students in grades 9 through 12 in the norm population.

H3: The intellectually gifted females yielded higher career maturity level results than their male counterparts.

H4: The career maturity level scores of both groups, intellectually gifted and typical adolescents, increased as the grade level increases.

Definition of Terms

Career- "The totality of work one does in his/her lifetime." As defined by the National Vocational Guidance Association Panel (Sears, 1982, p. 132).

Career Maturity- One's readiness to make sound, well-informed decisions about career selections (Crites and Savickas, 1995a; Super, Thompson, Lindeman, Jordaan, & Myers, (1988).

Career Maturity Inventory-Revised (CMI-R)-An assessment designed to determine the level of one's readiness to choose a career. Developed by J. O. Crites (1978a), the CMI is divided into two scales: the Attitude Scale Form A-2 and the Competence Scale. The revised version, CMI-R, was released in 1995 by J.O. Crites and M.L. Savickas and is comprised of 25 items on each scale, Attitude and Competence.

Career Development- "The process that involves the integration of psychological, sociological, educational, physical, economic, and chance factors that provide the basis for a career over an individual's life" (Isaacson, 1986 p. 54).

Intellectually Gifted Students-Students who have been identified as intellectually gifted in accordance with the Regulations for the Gifted Education Programs in Mississippi

(MDE, 2005) and have been selected for participation in a gifted program based on the local school district's standards.

Multipotentiality-Having aptitudes and abilities that enable one to succeed in multiple areas (Gassin, Kelly, & Feldhusen, 1993; Higgins & Boone, 2003; Kerr, 1990; Silverman, 1993).

Typical Middle School Students-For the purposes of this study, the author defines typical middle school students as those enrolled in 6th and 7th grade regular education English classes, excluding those identified as intellectually gifted and those with exceptionalities that require placement self-contained classrooms.

Typical High School Students- Students in 9th, 10th, 11th, and 12th grades included in the population sample at the time normative data was collected for the CMI-R (Crites & Savickas, 1995a).

Delimitations

1. Intellectually gifted participants were limited to 6th and 7th graders who had been selected for the intellectually gifted program in an urban school district centrally located in the state of Mississippi.
2. Typical middle school students was limited to those enrolled in regular 6th and 7th grade English classes who were in attendance at the same urban school district centrally located in the state of Mississippi.
3. The scores of high school students used for comparison to that of the intellectually gifted middle school students in the sample population were derived from the norm sample of 9th through 12th grade students on the CMI-R (Crites and Savickas, 1995a).

4. The criterion variable was limited to the total score achieved on the CMI-R Attitude Scale Form A-2.
5. The predictor variables were limited to gender, grade level, and program placement as intellectually gifted and typical middle school students.

Limitations

Some of the participants to be included in this study had had exposure to career-related information through the use of Mississippi's Tech Prep initiative utilized throughout the state to introduce students to the skills and competencies necessary to succeed in the workplace (Barnett, 2005). Although there is no career development program implemented at the 6th grade level, Career Discovery is taught at the 7th grade level, Computer Discovery at the 8th grade level, and Technology Discovery at the 9th grade level. It is unknown whether the participants included in the norm group had had any form of career education prior to the completion of the CMI-R (Crites & Savickas, 1995a).

Assumptions

The following assumptions were made regarding the study:

1. All participants responded to the assessment honestly.
2. Participants provided accurate demographic data.

Theoretical Framework

There are two major types of theories in the area of career development: structural theories and developmental theories. The central focus of structural theories is on the characteristics of the individual as well as occupational tasks. Whereas, developmental theories are more involved and ongoing in the sense that the focus is on

human growth and development across one's life span. The theoretical framework of the research project is based on two theories of career development, Frank Parsons' Trait and Factor Theory (1909) which is a structural theory and Donald Super's Career Development Theory (1957) noted in the literature as one of the most commonly accepted and widely used developmental theories.

In an analysis of the career maturity levels of intellectually gifted students, it is believed that a structured, organized, and comprehensive method of career education coupled with an understanding of the unique needs of gifted students is essential to enabling adolescents to make sound career decisions early. Parsons' (1909) Trait and Factor Theory is grounded on the belief that one's career choice should depend on three factors: 1) an accurate knowledge of one's self, 2) a thorough awareness of job specifications and requirements, and 3) one's ability to discover a proper balance between the two. During the administration of the assessment, the CMI-R (Crites & Savickas, 1995b), students were rated on their readiness to make career decisions based on their current backgrounds without benefit of newly introduced career information. A comparison of intellectually gifted students to their same-age peers and high school students in the norm population, as well as an examination of the scores attained by intellectually gifted males and females, allowed the researcher to conduct a thorough analysis of gifted students' vocational maturity with regard to their perceived multipotentiality. Because one of the major assumptions of Parsons' (1909) theory is that close matches between individuals' characteristics and job traits correlate with job satisfaction and success, it is essential that the career guidance of multipotentialed intellectually gifted adolescents be carefully planned and implemented.

Career maturity is one of the primary concepts in Super's Career Development Theory (1957). He posits that individuals make career decisions based on an evolution of factors as they mature such as, socioeconomic factors, mental and physical abilities, personal characteristics, and exposure to various aspects of life. The Career Development Theory is comprised of several stages that were at one time thought to be sequential. However, Super has since recognized that individuals may move in and out of the stages throughout his or her life span. Those stages include 1) Growth, 2) Exploratory, 3) Establishment, 4) Maintenance, and 5) Decline (Super, 1957).

Utilizing this method in this research project assists in laying the groundwork for career counseling approaches that move away from practices based on theories such as the Socioeconomic Theory. This theory, also known as the "accident" or "chance" theory, is based on the premise that many individuals "follow the path of least resistance in their career development by simply falling into whatever work opportunities happen to come their way" (NOICC, 1996). The use of instruments to assess often overlooked factors, like career maturity, can guide multipotentialized intellectually gifted students in a more structured manner, because career selection should be based on experiences, awareness, and a thorough analysis of one's abilities as it relates to the individual's personality and interests, rather than convenience, chance, or undue influence.

Significance of the Study

Empirical research regarding the career choice readiness of intellectually gifted adolescents is limited (Greene, 2002; Kelly & Cobb, 1991). Several research projects that focus on career development for the intellectually gifted students provide either a literature review or an analysis of such topics as the career interests of students in this

population (Kelly & Cobb, 1991). This project will add to the body of literature through an emphasis on an additional facet often overlooked for intellectually gifted students, namely a comparison of the abilities of intellectually gifted children to that of their same-age peers, as well as to high school students within the population norm with regard to their background knowledge and ability to select a career path. An investigation of the career maturity levels of gifted and talented adolescents will prove beneficial to teachers of the intellectually gifted at all grade levels, school counselors, and career and vocational counselors, as it will provide a basis for establishing a comprehensive program for the career development of multitalented students and assist educators in determining whether intellectually gifted students are prepared and able to make informed career decisions.

CHAPTER II

REVIEW OF LITERATURE

For the purpose of providing the reader with a thorough understanding of the population of students included in the research project, the review of literature section is comprised of an overview of the changing phases of gifted education and the characteristics of intellectually gifted students. In addition, details regarding the history of and changes in the field of career and/or vocational education and its relationship to gifted and typical students are discussed. A synopsis of commonly used instruments that assess career maturity is included, as well as the need to analyze gender issues in gifted education and considerations that must be made in order to provide a comprehensive career counseling program.

Trends in Gifted Education

Determining appropriate educational activities to effectively meet the needs of intellectually gifted students has been an ever-evolving task for the last 50 years. Definitions and identification practices are modified and enhanced in attempt to accommodate the rapidly-growing society. However, one commonality noted within all of the literature pertaining to the education of intellectually gifted students is that their needs differ from those of the norm and therefore, should be approached in a differentiated manner (Berger, 1990; Clark, 2002; Kerr, 1990; Reis, 1998; Rimm, 2001; Silverman, 1993).

Former Secretary of Education, Sydney P. Marland, conducted a survey of the needs of gifted and talented individuals. This was the first study geared specifically towards the analysis of the academic needs of gifted and talented students nationwide.

The release of the Marland Report (1972) by the U.S. Department of Education brought onto the national scene the necessity to establish appropriate educational programs that effectively met the differentiated learning needs of this population. Marland (1972) provided a description of gifted and talented students that broadened the concept of giftedness to include multiple areas. Many states adopted the Marland definition, although individual school districts do not necessarily utilize the description in its entirety for the selection of gifted and talented students for participation in programming (Seney, 2001). The definition reads

Gifted and talented children are those identified by professionally qualified persons who by virtue of outstanding abilities are capable of high performance. These are children who require differentiated educational programs and services beyond those normally provided by the regular school program in order to realize their contribution to self and society.

Children capable of high performance include those with demonstrated achievement and/or potential ability in any of the following areas:

- 1. General intellectual ability*
- 2. Specific academic ability*
- 3. Creative or productive thinking*
- 4. Leadership ability*
- 5. Visual and performing arts*
- 6. Psychomotor ability*

(Marland, 1972)

The Marland definition is a clear indication that differentiated curriculum and instruction is necessary to help gifted students reach their highest potential. However, it is not intended to infer that all highly-able students will be gifted in all areas, although many students do exhibit abilities in more than one area (Berger, 1990; Kerr, 1990; Silverman, 1993).

A follow-up assessment of the state of gifted education was released in 1994. The report was entitled *National Excellence: A Case for Developing America's Talent*. The findings indicated that although improvements had been made since the release of the Marland Report (U.S. Department of Education, 1972), the progress of identification and programming for gifted and talented students had not yet reached its full and expected potential. The report provided, yet, another definition of giftedness that describes this population as

Children and youth with outstanding talent who perform or show the potential for performing at remarkably high levels of accomplishment when compared with others of their age, experience, or achievement. These children and youth exhibit high performance capability in intellectual, creative, and artistic areas, possess an unusual leadership capacity, or excel in specific academic fields. They require services or activities not ordinarily provided by the schools. Outstanding talents are present in children and youth from all cultural groups, across all economic strata, and in all areas of human endeavor. (U.S. Department of Education, 1994).

The state of Mississippi enacted The Mississippi Gifted Education Act of 1989, which was amended in 1993. It mandated programming services for students identified

as intellectually gifted in grades 2 through 6 and allowed intellectually gifted students in grades 7 through 12 to participate in permissive programs (MDE, 2005). Amended in 1994 and again in 2005, the act also included provisions for permissive programs for academically talented students in grades 9 through 12, artistically gifted students in grades 2 through 12, and creatively gifted students in grades 2 through 12.

Definitions of giftedness vary from state to state. The term intellectually gifted students, according to the Regulations for the Gifted Education Programs in Mississippi (2005), are defined as “those children and youth who are found to have exceptionally high degree of intelligence as documented through the identification process” (p. 3). The state’s identification process involves five phases: 1) Referral, 2) Local Committee Review, 3) Parental Permission for Testing, 4) Assessment, and 5) Assessment Report Determining Eligibility.

Some common characteristics found in students identified as intellectually gifted are exceptional reasoning ability, intellectual curiosity, rapid learning rate, facility with abstraction, complex thought processes, vivid imagination, early moral concern, and/or a passion for learning (Silverman, 1993). No individual is expected to possess all of the characteristics listed; however, most intellectually gifted students tend to possess the majority of them.

Multipotentiality and Career Selection

As the aforementioned definitions have clearly indicated, gifted and talented students often work above the standard achievement level of their peers. Many researchers theorize that the same holds true in terms of their career development (Berger, 1990; Kerr, 1990; Silverman, 1993). Gifted students are often considered

multipotentialed (Berger, 1990; Colangelo, 2002; Kerr, 1990; Greene, 2002; Silverman, 1993; Wessel, 1999). The term definitively means that gifted and talented children have advanced skills and competencies in more than one area and are able to work at these tasks with “comparable intensities” (Reis, 2002, p.14). It is reasonable to deduce that students in this population may use these abilities to identify a successful career path.

Rysiew, Shore, and Leeb (1999) examined the concept of multipotentiality as it relates to gifted students and career selection. The authors provide literature to support the idea that gifted students often have difficulty making career decisions due to the myriad of choices available to them because they tend to be advanced in several areas. This difficulty may result in a delay in the selection of a career, indecisiveness about specific career interests, or even the random selection of a career field to which the child may not be suited. Rysiew, Shore, and Leeb (1999) effectively parallel Holland’s theory of vocational choice with the characteristics of a multipotentialed individual. It is suggested that career guidance and education be implemented at the elementary level. Students should be exposed to the career-decision making process and provided guidance in a general area of interest versus the early selection of a career. In addition, activities that teach gifted students how to examine themselves should also be utilized (Berger, 1990; Kerr, 1990; Rysiew, Shore, and Leeb, 1997).

Higgins and Boone (2003) address multipotentiality as an issue that may cause the student to be able to move neither forward nor backward because of the student’s inability to choose from the vast variety of opportunities available to them. Often, gifted students accept the career choice that is most encouraged by society rather than taking a

proactive role in selecting a career in which they would be the most pleased and productive.

Reis (2002), whose focus was on multipotentiality in gifted females, describes three routes that gifted females might take when making a career decision. She states that some individuals may view multiple options as multiple opportunities. For other gifted females, the myriad of choices may prove overwhelming and they may be unable to make a choice or find a career that is a good fit for them (Reis, 2002; Rysiew, Shore, and Leeb, 1997). While others, still, may intentionally focus on only one area early in which they set out to achieve mastery, so as to avoid having to sort through several choices. The negative aspect of this approach is that the students limit themselves in areas in which they may have actually succeeded because those areas are never examined (Reis, 2002).

Greene (2002) however, posits that gifted and talented students should perhaps be viewed as multidimensional rather than multipotentialed. The former term indicates an accentuation on the numerous facets of these students, rather than the “perceived capacities for their future performance” (Greene, 2002, p. 66). The difficulty in the career planning of gifted students may not lie solely with multipotentiality, but rather with a lack of decision-making skills (Berger, 1990; Green; 2002).

History of Career Development

Career development is a lifelong process (Gies, 1990). As individuals mature and mindsets change due to life experiences, one’s career interests, aptitudes, and abilities are inevitably modified to meet one’s own personal needs. The emphasis on career development has spanned over 90 years (O’Brien, 2001; Zytowski, 2001). Since the dawn of the vocational education movement, spearheaded by Frank Parsons, now

considered the father of vocational guidance, the process of smoothly transitioning from the school setting to the industrial arena became a primary goal of educational institutions (O'Brien, 2001; Zytowski, 2001).

There have been numerous efforts at the state and national levels to provide a framework for enhancing the career education of all students. In 1994, President Bill Clinton signed the School-to-Work Opportunities Act (PL 103-239) which authorized \$300 million in funds for states to develop programs that would provide systematic career education programs. Monies were partially funded and administered by the U.S. Departments of Labor and Education. States were also able to use funds to develop partnerships with other agencies willing to contribute to this effort.

As a result of this legislation, the state of Mississippi received funds to develop a five-year program entitled *Fast Forward Mississippi*, Mississippi's School-to-Careers Initiative from 1998 to 2003. Partnerships were formed with school district, community and junior colleges, colleges and universities, economic development and community organizations, and local businesses and industries (Fast Forward Mississippi, 2002). Although the funding has been depleted, the Fast Forward Mississippi website is still maintained in order to provide students, parents, and teachers with career information via the world-wide web.

Career Stages

Dubois (2000) theorizes that people transition through seven stages as they embark on their career journey. This process may not occur in a linear fashion and may be explored formally, through the use of career development programs, or informally, without benefit of assistance. The stages include 1) Exploration, 2) Personal Assessment,

3) Analysis, 4) Decision-making, 5) Planning, 6) Implementation or development, and 7) Life-work Management.

Stage 1 is the exploratory stage, which involves an examination of the body of knowledge that a person already possesses prior to selecting a career path or engaging in career exploration activities. At this stage, individuals are already aware of more commonly known careers and have acquired information regarding at least the basic course requirements to reach that career goal. For example, by the time students reach early adolescence, they are familiar with careers, such as doctors, lawyers, and teachers. In addition, they also understand simple core requirements for these areas, such as that doctors will need science classes, lawyers must go to law school, and that teachers had to attend college (Dubois, 2000). However, they may lack knowledge regarding more specific requirements, such as years of schooling needed, tuition costs, average income, or areas of specialization within that field (Dubois, 2000; Silverman, 1993).

Career-related knowledge that students have at the exploration stage is that which has been gathered from the people around them. Parental influence and parents' career choice have a great impact on the career decision-making process of their children (Fisher & Padmawidjaja, 1999; Kher-Durlabhji & Lacina-Gifford, 1997; Reis, 2002; Silverman, 1993). Unfortunately, many arrive at this stage without any grounded ideas about their life's work. This is the point at which students gather information through conversation, reading, or research, such as that which may be acquired on the Internet (Dubois, 2000).

Stage 2, personal assessment, refers to the individual's process of analyzing his or her particular values, interests, and abilities. More specific, detailed information about careers is gathered through the use of inventories, surveys, checklists, etc (Dubois, 2000).

At stage 3, analysis, involves the perusal and scrutiny of the assessment information gathered at stage 2. It is at this stage when people begin to truly gain an understanding of the world of work and distinguishing between their likes and dislikes (Dubois, 2000).

However, Savickas (2000) encourages that career counselors exercise caution at this point, because assessment instruments that gauge students' interests and abilities prove very useful for those who are prepared to make career decisions, which he referred to as *decisive clients* (p.430). Contrarily, providing a compilation of additional information to someone who is still in the indecisive phase of career planning may serve to be overwhelming to the individual and may become a source of complex confusion because the student cannot see the value of the information, because they simply do not know how to use it (Savickas, 2000).

The decision-making phase of one's transition occurs at stage 4. It is not at this stage where one selects a specific career and attempts to enter it, but rather a preferred career path is chosen and goals are set to help the person attain a career in that field (Dubois, 2000).

During the planning stage, 5, individuals devise a plan as to how they will reach the goals they have set. This is a detailed, step-by-step plan of action in which individuals decide on the tasks to be undertaken, the timeline for completion, sources of assistance necessary to complete the tasks, and the expected outcomes (Dubois, 2000).

Implementation and/or development, stage 6, is that in which the individual actually conducts the plans. The method of reaching the goals identified in the plan is up to the individual. Dubois (2000) notes that it may be necessary to complete certain tasks independently; however, some may be carried out simultaneously.

The final stage, 7, is life-work management. It is at this stage when the person recognizes the achievement of the goals in the plan and realizes how to utilize that which is learned from the achievement to continue to reach higher, more complex goals. It is also at this stage that the person must determine ways to manage this new information while balancing all of his or her life changes. Dubois (2000) states that this may occur during any of the seven stages and could possibly be the greatest challenge of any phase.

Career-related Instruments

A series of instruments may be utilized to determine the needs of students beginning their career exploration. Feldhusen, Jarwan, and Holt (1993) discuss the choice of assessment instruments appropriate for use by school counselors. Personality assessments, self-concept scales, interest inventories, aptitude tests, and career interest inventories are amongst the available options. The extensive review of each assessment is very useful for researchers or counselors who are seeking an appropriate assessment for these topics. The authors explain how a student's personality and interests may be useful in determining an appropriate career path. Although the assessments were designed for all students, they may be used to address the differential needs of intellectually gifted students (Feldhusen, Jarwan, & Holt, 1993).

Career Maturity

It is important for school counselors, career and vocational counselors, and career educators to analyze the level of knowledge that students already maintain when beginning their career exploration. It is possible that the decision-making and planning skills of some students are higher than others. One such means of measuring their level of understanding of the world of work is to analyze the students' career maturity. Career maturity is one's readiness and ability to make sound, realistic career choices that remain consistent over time (Crites & Savickas, 1995a; Patton, 2001; Savickas, 1990). The more *mature* attitudes students have, the more capable they are of handling age-appropriate career development information (Patton, 2001; Savickas, 2000). Students who have not developed a high enough capacity to acquire and understand career-related information may have problems making a career selection. Providing students with less mature attitudes with additional information before they are ready to handle it, causes confusion when they attempt to make career decisions (Savickas, 2000). Therefore, identifying the students' level of career maturity will prove advantageous because it helps school and career counselors determine their students' individual level of need during the career development process.

Assessments of Career Maturity

Two of the most commonly used instruments that assess career maturity are the Career Development Inventory (CDI) (Super, Thompson, Lindeman, Jordaan, Myers, Roger, 1988) and the Career Maturity Inventory (CMI) (Crites, 1978a). Although the CDI has been out of print since December 2001, this instrument has been used extensively for research purposes (Impara & Plake, 1998). The School Form of the CDI

is designed to measure the attitudes and knowledge of careers for individuals in grades 8 through 12. There is also a College and University Form for students college-age and above (Super, Thompson, Lindeman, Jordaan, & Myers, 1988). Levinson, Ohler, Caswell, & Kiewra (1998) state that the CDI might be useful to determine a student's level of readiness to make educational and career planning decisions. It also provides information about the individual's "attitudinal and cognitive strengths and deficiencies" (Super, Thompson, Lindeman, Jordaan, & Myers 1988, p. 478).

Kelly & Cobb (1991) used the CDI to assess the career development characteristics of gifted students ages 11 to 14. The researchers found that the participants had advanced career-planning skills that were characteristic of students several years older. Although there were no cultural differences found, there was evidence of differences between the genders as it relates to high- and low-paying careers. The girls selected lower paying careers than the boys. The findings concurred with that which was conducted by Dunnell and Bakken (1991) who found that gifted females scored higher than males in prior knowledge of careers and males preferred more traditional occupations than females.

The Career Maturity Inventory (CMI) (Crites, 1978b) was developed to assess the career maturity levels of students in grades 6-12. The entire assessment is lengthy, as it takes approximately 2 hours and 30 minutes to administer. The instrument is divided into two parts: the Attitude Scale Form A2 and B1 and the Competence Scale. The scales may be used independently for research and diagnostic purposes (Super, Thompson, Lindeman, Jordaan, Myers, Roger, 1988).

In 1995, the CMI (Crites, 1978a) was revised by J.O. Crites and M.L. Savickas to reduce the amount of time required for administration. Each section of the assessment consists of only 25 items for the Attitude Scale and 25 for the Competence Test. The revised edition was designed for students in grades 5-12 as well as adults (Crites & Savickas, 1995b). The CMI-R (Crites & Savickas, 1995b) is designed so that scores should increase as a student's grade level and career exposure increases. In other words, the higher career maturity score achieved, the greater prepared the student is to make career selections.

Barnes and Carter (2005) utilized the CMI-R (Crites & Savickas, 1995b) to examine the career maturity levels of 221 high school students in grades 9-12. Female participants scored numerically higher than males, however, there were no statistical differences found between genders. An unexpected finding in the study is that there were no statistically significant differences found between the career maturity levels of the 9th and 12th graders included in the study sample. The researchers noted that a personal communication with the author of the instrument, Crites, revealed the finding was considered an anomaly, which means that the test subjects could possibly be atypical when compared to the norm group (Barnes & Carter, 2005, p. 14) found the CMI-R (Crites & Savickas, 1995b) to be useful for school counselors interested in "evaluating a comprehensive and developmental guidance program" (Barnes & Carter, 2005, p. 13). However, it is recommended that school counselors identify the developmentally different needs of all students individually in order to plan an effective program.

Career Education and the Gifted

Just as the state of gifted education has changed dramatically over the years, so has the career development process. This is not only the case for students enrolled in regular education classes, but also for students with disabilities, as well as gifted and talented students. Differentiated instruction should not be limited to major subject areas, such as Language Arts, Reading, Mathematics, and Science. Comprehensive programs for the gifted should include a counseling component, opportunities for mentoring relationships, hands-on experiences, and advanced career development (Silverman, 1993).

Moon and Feldhusen (1993) examined the effects of multiple-criteria identification and participation in a three-year pull-out program based on the Purdue Three-Stage Model on the long-term goals and accomplishments of high school seniors. The subjects participated in an enrichment program during the elementary school years but did not receive any gifted programming services beyond those three years. A variety of qualitative methods were used to collect the data, including questionnaires comprised of open-ended questions regarding accomplishments in high school and a survey that covered the highest degree the students expected to attain, family and personal goals, professionals goals, and the students' perceptions of the effects of the enrichment program on their future plans. Several high-level accomplishments had been achieved, including acceleration at the junior high and college levels and awards in both academic and athletic arenas. All of the students had plans to attend college and most aspired to attend graduate school. All of the subjects planned to pursue a career as well. Although this study provides support for early identification and participation in a well-planned

enrichment program, the results must be carefully interpreted because the sample size of 23 was so small and were from one cohort group.

Higgins and Boone (2003) emphasize the need for early intervention and career guidance for students who are gifted. The authors note that it is important to provide these students with preparation for adulthood as early as elementary school, because the high school years are too late to begin this process. It was indicated that current thinking in this area is changing in that parents and educators may demonstrate early that the “boundaries between school and the real world are thin” (Higgins & Boone, 2003, p. 138).

Silverman (1993) stated that, as of 1991, there was not much empirical evidence of the differences in the career aspirations of gifted and nongifted students. The author focuses on various aspects of career counseling including advice on how to deal with early and late decision-makers, suggestions for counseling multitalented students, and real-life experiences that will aid gifted students in the career development process. The author provides strategies for helping students cope with multipotentiality. Some of them included were 1) preparing several options, 2) allowing them to delay career decisions until college, and even 3) allowing them to create new careers. Silverman (1993) also recommends providing students with the opportunity to engage in real-life experiences during the career planning process. One such suggestion is establishing mentoring relationships with the gifted child and a professional in a specific field. Silverman (1993) offers five possible options for effective mentoring: shadowing, internships, community service/volunteer work, job studies, and part-time employment/work study.

Olszewski-Kubilius and Scott (1992) explored the needs of economically disadvantaged, minority students as it pertains to college and career counseling. Two groups of students were compared: 50 low-income, minority students and 42 high income Asian and Caucasian students. The college plans, the students' level of preparedness, career aspirations, and expectations about college were the areas examined. The results indicated that the minority students had significantly lower expectations about college and how to finance their education than the higher income students. However, the minority students had more well-developed skills for selecting a career.

Parental Influence on Career Choice

A suggestion highlighted by Silverman (1993) that is not prevalent in the body of literature pertaining to career education for the gifted is the implementation of parent education. The author asserts that parents should be educated about career-related issues that could affect their children because they are their children's primary caregivers. Additionally, parents should be informed of the financial aspect of their child's advanced education so that planning may be conducted early in the event that scholarship opportunities are unavailable.

Kher-Durlabhji and Lacina-Gifford (1997) assessed gifted students' desire to enter the teaching profession and their perceptions of teaching as a career. An analysis of students' preferences revealed that gifted and talented students ranked *scientist* and *doctor* as the two highest selections; whereas, nongifted students identified *doctor* and *lawyer* as their top choices. All of the groups surveyed ranked *teaching* and *sales* as the lowest career choices. Evidence that parental and adult influence played a large role in discouraging students from entering the field of education was also noted. The influence

of adults, particularly parents, on the students' selection of a career is great because parents are their children's first role models (Silverman, 1993).

Fisher and Padmawidjaja (1999) conducted a study to determine whether parental influence was a significant factor in the career decisions of African American and Mexican American college students. The authors stress that the majority of the studies on this aspect of career development tend to focus on White, middle-class students. However, the results of these studies are often applied to all students. Interviews were conducted with 20 African American and Mexican American college students. Results indicated that there were no significant differences between the genders or ethnic groups. Like Kher-Durlabhji and Lacina-Gifford's (1997) research project, parental influence and parental advice was identified as a major factor in the career selection of the participants.

An additional influence not often taken into consideration is outside activities and the influence of persons other than parents or other caregivers. Milgram and Hong (1997) analyzed the relationship between the out-of-school activities in which students participate during their adolescent years and their vocational choice during adulthood. Ninety-one men ages 30 to 31 who had been identified as gifted in 1982-1983 participated in this research project. The results indicated that 45% of the participants demonstrated a strong relationship between their involvement in out-of-school activities and their career selection. A higher level of work accomplishment as well as work satisfaction were found among subjects whose vocational choices were matched with their careers than those with whom no match was indicated. The most significant limitation to this study was the exclusion of gifted females from the sample. Including

females in the study would make the information gathered applicable to a larger population and would provide greater validity to the body of research.

Gender Differences and Career Aspirations

The plight of the gifted female is an issue that has received extensive review (Clark, 2002; Kerr, 1990; Reis, 1998; Rimm, 2001). Incidentally, the career education needs of gifted females and gender issues related to gifted students' career aspirations in general have also received more attention during the last decade (Dunnell & Bakken, 1991; Gassin, Kelly & Feldhusen 1993; Greene, 2002; Hollinger, 1991).

Gassin, Kelly, and Feldhusen (1993) discuss the unique needs of gifted females and the effects of multipotentiality. They note that gifted girls may "devalue their talents and ultimately underachieve in school and the workforce" and that school counselors should keep this potential problem area in mind as they plan career development activities (Gassin, Kelly, & Feldhusen, p. 90). However, the return rate of only 27% was a severe limitation to this study. The results must be carefully interpreted, because it is based on such a small sample size.

Dunnell and Bakken (1991) investigated the attitudes about sex roles and career plans of gifted high school students with regard to age and gender. Two instruments were used in this study, the Attitudes Toward Women Scale and the Occupational Check List. The study was comprised of 60 high school students: twenty-four 11th and 12th graders and thirty-six 9th graders. In terms of career selection by gender, the younger males favored more traditional careers than older males; and the females scored significantly higher than males on both measures. It was also concluded that males have more traditional attitudes about sex roles than females. Many of these opinions seemed

to be based on the values instilled by their parents and other adult role models. This assumption is supported in the work of Silverman (1993) and the research conducted by Kher-Durlabhji and Lacina-Gifford (1997) who both cite parental influence as significant in the career selection of gifted children.

Leung, Alvin, and Collie (1994) analyzed the career and educational aspirations of gifted high school students. The participants in this study completed an assessment that required them to identify their career preferences at various ages. It was considered a retrospective study because respondents were expected to reflect on careers in which they were interested during previous stages in life. The Occupations List (OL) (Leung & Harmon, 1990) was the instrument used in the study to compare the occupations as well as gender differences. The results indicated that the girls seemed less determined than the boys to follow through on their career goals. It was also concluded that gifted students tend to prefer more prestigious careers as their ages increase. The gender differences between career aspirations of the students assessed was inconsistent with the findings that there were no differences between boys and girls' career choices as it related to prestige. An extensive list of suggestions was offered for school counselors. Although investigations of this type are very valuable, the use of retrospective data was considered a limitation in this study because this method forced the participants to recall information at earlier stages in their lifetime. Memory loss and errors in recall are two possible problems with using this technique.

Hollinger (1991) states that the barriers, both internal and external, have remained relatively the same; however, research has increased the knowledge and understanding of the needs of gifted females. The author suggests incorporating the following aspects in

the career development process for females: 1) the consequences of sex role socialization, 2) the influences of societal stereotypes, 3) the relationship between career and other life roles, and 4) the importance of connections with and expectations of significant others.

The most important finding is the need for educators to focus on the differential needs of gifted females and the impact of societal influence.

Comprehensive Career Counseling Programs

Feller (2003) examined the role of school counselors and the counseling programs implemented in the school with regard to the preparation of students for academic and career transitions. The author provides evidence to support the idea that school counselors need to re-evaluate their programs regularly to help students make positive transitions beyond the school level in an effort to decrease the noncompletion rate of college students, despite the increasing enrollment. Berger (1990) postulates that counselors utilize a systematic collaborative approach to assist students who are preparing for college planning that will help them to realize that it is an integral part of their career development. She states that engaging in college preparation activities should not “be a finite event that begins and ends mysteriously or arbitrarily” (p.1). Feller (2003) also notes that career theory and practice must be modified as the work environment changes so that students entering the workforce will be prepared. Included are workplace trends for the 21st century as well as future predictions as to what young adults should expect during their transition from school to career. Unlike many of the previously reviewed articles, this document offered future predictions for all students, including those who are gifted and talented. Based on previous research regarding this

population, one may deduce that as the career counseling needs for all students change, so must the career planning process for students with differentiated counseling needs.

Conversely, Greene (2002) argues that the task of developing a comprehensive career development program is often left to the “already overburdened school guidance counselors” (p. 67). It is recommended the parents, teachers of the gifted, and career and vocational counselors should approach the task as a team effort. The author also suggests that parents and educators be equipped with career-related information to help guide gifted and talented students in the proper direction.

The National Career Development Association, formerly the National Vocational Development Association, has created career education guidelines for students at the elementary through high school levels (NCDA, 1997). Competencies and indicators are provided for each level and skill area. These guidelines are useful for career exploration and planning for students at the elementary, middle, and high school levels.

The state of Mississippi has included a career development component in its 2004 release of the Gifted Education Program Standards. The standards are designed so that the individual school districts may be rated according to a rubric on a level ranging from 1 to 4. The guiding principle for this section states that “Career exploration and life skills shall be an integral part of the differentiated program of instruction for all gifted students” (MDE Program Standards, 2004, p. 3). The levels are presented in Table 1.

Table 1 MDE Gifted Education Program Standard

<i>Guiding Principle 5</i>	<i>Career exploration and life skills shall be an integral part of the differentiated program of instruction for all gifted students.</i>
<i>Level 1</i>	<i>Does Not Meet Standard</i>
	<i>5.1 Career exploration and life skills are NOT included in the district's Instructional Management Plan for gifted students.</i>
<i>Level 2</i>	<i>Meets Minimum Standard</i>
	<i>5.2 Career exploration and life skills are included in the district's Instructional Management Plan for gifted students.</i>
<i>Level 3</i>	<i>Above Standard</i>
	<i>5.3 In addition to level 2, personnel in the gifted education program assist in establishing contacts for mentorship experiences for gifted students.</i>
<i>Level 4</i>	<i>Exemplary</i>
	<i>5.4 In addition to level 3, internships are facilitated at an appropriate age in order to provide career exploration experiences based on the specific needs and interests of gifted students.</i>

Differentiated instruction for the gifted and talented is necessary to assist students with proper growth and development. Current literature indicates that a career development component should be included in the curricula for the gifted. These differential needs must be addressed with a team approach. Teachers of the gifted, school counselors, career educators, career counselors and parents should take part in the implementation of this component.

Summary

Future research should focus on differentiation as well as issues, such as gender and career maturity. However, empirical research that focuses on strategies to combat the negative effects of matters such as multipotentiality or understanding traditional

versus nontraditional occupations is also needed. In addition, parents and educators should be provided with detailed information about the characteristics of gifted children as well as the stages of career development and how the two intertwine. This process will provide a means for adults to appropriately direct the career planning and exploration of highly-able students and assist them in selecting a fulfilling career that parallels their interests and abilities rather than allowing them to conform to the societal pressures that often leads to indecisiveness or the selection of their life's work based solely on high income and/or prestige.

CHAPTER III

METHODOLOGY

Overview

The Career Maturity Inventory-Revised (CMI-R, Crites & Savickas, 1995b) was used in the study to assess intellectually gifted and typical middle school students. The researcher compared the scores of the two groups of middle school students, as well as made a comparison of the scores by grade level and gender. In addition, the career maturity scores of the intellectually gifted adolescents was compared to that of the 9-12 graders that compose the norm group of the CMI-R.

Research Design

Data for this research project was gathered over the course of a two week period. Because of the design of the instrument that was utilized, each group of student participants were able to provide necessary information in one session; therefore, further data collection was not required. The following operational definitions were used to gather data for this research project:

Career Maturity-The dependent variable that will be operationally defined as the total score on the Career Maturity Inventory-Revised, Attitude Scale (Crites & Savickas, 1995b).

Gender- The independent variable, males and females, will be denoted in the student demographic section of the answer sheet to be completed by participants prior to beginning the assessment instrument.

Grade level-The independent variable as identified in the student demographic information.

Intellectually Gifted Students- 6th and 7th grade students identified as intellectually gifted according to the Mississippi Department of Education guidelines and currently being served in a program for intellectually gifted students at the middle school level.

Typical Students-6th and 7th grade students enrolled in regular education English classes who are not currently being served in a program for students with special needs, such as classes for students with identified gifts or severe disabilities that require inclusion in a self-contained classroom.

Typical High School Students-Those students included in the norm population for the Career Maturity Inventory (Crites & Savickas, 1995a).

Participants

Approximately 240 participants were solicited for this research project to yield a power of 70% or better to detect moderate relationships. Sixty intellectually gifted students were invited to participate from the district's school-based gifted program at each grade level, 6th and 7th, for a total of 120 students. Sixty typical middle school students were randomly selected from the pool of students enrolled in regular English classes at each grade level 6th and 7th, excluding those with severe exceptionalities that require inclusion in a self-contained classroom. The students were attendees in 3 of the district's 9 middle schools.

The participating school district is centrally located in the state of Mississippi and is comprised of approximately 60 schools: 40 elementary schools, 9 middle schools, 8 high schools, a Career Development Center for high school students in vocational education, and 2 special schools- an alternative school and a school for at-risk students. The district has a student population of 31,580. Twenty-nine hundred sixty-eight

students are identified as intellectually gifted district-wide, while 893 participants in the gifted program are at the middle school level.

The schools selected for participation in the study have a student population of gifted students of the following: School A: 97; School B: 166; and School C: 102. The typical middle school students included in the study are those who have been randomly selected from the school's regular education 6th and 7th grade English classes. The participating schools were selected because of the large population of intellectually gifted students at each, as well as the likelihood of attaining a sufficient and relatively balanced number of male and female participants.

Instrumentation

The instrument to be utilized in this research project is entitled the Career Maturity Inventory-Revised (CMI-R), 2nd Edition (Crites & Savickas, 1995b). The CMI-R was designed to gather data regarding the attitudes and competencies necessary to make mature career decisions. The assessment was written on a 5th grade reading level and may be used for students in grades 5 through 12, as well as adults. Normative data was based on students in grades 5 through 12 and adults.

The original instrument was developed in 1961 and was entitled the Vocational Development Inventory. This assessment made groundbreaking impact because it was the first instrument to analyze the actual process students go through when actually making a career choice versus assessing the content of career choice (Crites & Savickas, 1995b). The instrument was comprised of 50 items that focused on the attitudes.

A revised version, the Career Maturity Inventory (CMI) was developed in 1973 and revised again in 1978. (Crites & Savickas, 1995b). It was redesigned to include the

additional facet of competencies that are necessary to make a realistic career choice. It was divided into two sections: the Attitude Scale Form A2 and B1 and the Competence Test. The Attitude Scale was comprised of 50 items that focus on a variety of aspects including 1.) Orientation to Career Choice, 2.) Involvement in Career Choice, 3.) Independence in Career Choice, 4.) Compromise in Career Choice, and 5.) Decisiveness in Career Choice.

The most recent revision of the inventory, the Career Maturity Inventory-Revised (CMI-R) (Crites & Savickas, 1995b) was condensed to 25 items per section, the Attitude Scale and the Competence Test. The participant is expected to select either agree (A) or disagree (D) on the answer document. The assessment is designed so that higher scores indicate a greater degree of career maturity, i.e., students are equipped with enough knowledge about careers to make sound, informed career decisions. This revision lessened the administration time from 2½ hours to approximately 30 to 45 minutes. In addition, the time needed to score the assessment was also reduced.

For the purposes of this research project, the Attitude Scale will be the only portion of this test used because it is suitable for determining the client's level of maturity (Crites & Savickas, 1995b; and Healy, 1994). The lowest possible score on this portion of the assessment is 1 and the highest attainable score is 25.

The test-retest reliability for the Attitude Scale was reported at .72, while the internal consistency is reported to range from .72 to .90. Numerous empirical studies that support the validity of Attitude Scale Form were cited (Busacca & Taber, 2002; Crites, 1978a, Healy, 1994; Jepsen & Prediger, 1981; Levinson, Ohler, Caswell, & Kiewra, 1998; Rojewski, Wicklein, & Schell, 1995; Stowe, 1985; Westbrook, Sanford, &

Donnelly, 1990). The most recent was conducted by Busacca and Taber (2002) which found moderate construct and criterion validity for the CMI-R (Crites & Savickas, 1995a).

Procedures

Permission to conduct the study was requested from the following district personnel: the Superintendent of Schools (Appendix A), the Assistant Superintendent of Middle Schools, the Gifted Coordinator, and the Director of the Department of Accountability and Research (Appendix B). After permission to conduct the study was received from the Institutional Review Board (Appendix C), the researcher made contact with the principals, the teachers of the gifted, and the English teachers to arrange dates for distributing permission forms and administering the assessment.

Parental requests for student participation in the study were dispensed to the students with a return date of approximately one week later (Appendix D). Students who returned signed permission forms were given an assent form which acknowledged their agreement to participate in the research project and reiterated that their participation was strictly voluntary (Appendix E).

Administration of the instrument, CMI-R Attitude Scale (Crites & Savickas, 1995a), was scheduled for completion within a two-week period. Both groups of students, gifted and typical, were evaluated on the same day at each school. Because the duration of administration only ranges from 30 to 45 minutes, data collection only took one day per school.

Data Analysis

Hypothesis 1 and 3 were analyzed using independent t-tests. Hypothesis 2 was analyzed using a single sample t-test. Hypothesis 4 was analyzed using a two-way ANOVA with a priori comparisons at the .05 alpha level. The significance level was set at .01 to control for Type I errors across the four hypotheses.

CHAPTER IV

RESULTS

Data were collected to determine whether intellectually gifted middle school students had a higher degree of career maturity than their typical middle school-aged peers. Additionally, a comparison of the career maturity scores of the intellectually gifted students to that of the scores acquired by ninth through twelfth grade students included in the norm data for the Career Maturity Inventory-Revised (CMI-R), Attitude Scale (Crites & Savickas, 1995b) was conducted. Intellectually gifted males and females were also compared to determine if the girls displayed more mature attitudes toward careers than boys.

Summary of Procedures

Three middle schools were selected for the research project from a school district centrally located in the state of Mississippi. Approximately 1097 typical students were invited to participate based on their enrollment in regular 6th and 7th grade English classes. Three hundred sixty-five intellectually gifted students were invited to take part in the research project as well. The selection of students in this group was based on their participation in the district's school-based program for intellectually gifted students who were identified in accordance with the Mississippi State Department of Education's criteria for identification, which includes obtaining a score of 120 or above on an individually administered test of intelligence.

Parental permission forms were distributed to students who were given approximately one week to return the forms (Appendix D). Student assent forms were

distributed prior to the administration of the assessment to students who returned their permission forms (Appendix E).

The research sample was derived from a pool of 365 intellectually gifted students and 1097 typical students enrolled in the 6th and 7th grades. The number of participants who returned permission forms included 86 intellectually gifted students and 210 typical middle school students.

Student demographic data, such as gender and grade level were reported the answer document by each participant. Assessments were completed by each student individually within a whole-group setting. Although a two-week window of time was designated for data collection, the administration of the assessment only took one day per school.

The research sample demographics are presented in Table 2. Slightly more than half of the participants or 55.7% were 6th graders, while 44.3% were 7th graders. A comparable number of males and females participated in the study, as 48.6% were males and 51.4% were females. The majority of the participants, however, were typical students (70.9%), and 29.1% were intellectually gifted students.

Table 2

Research Sample Demographics

	<i>n</i>	%
<u>Grade Level</u>		
6 th	165	55.7
7 th	131	44.3
<u>Gender</u>		
Male	144	48.6
Female	152	51.4
<u>Program Placement</u>		
Intellectually Gifted (IG)	86	29.1
Typical (T)	210	70.9

Frequencies and percentages for the participants by grade level and gender are presented in Table 3. There were twice as many female respondents (107) in the 6th grade as males (58). Of the 7th grade respondents, 61 were males and 70 were females.

Table 3

Frequencies and Percentages of Participants by Grade Level and Gender

Grade Level	Male	%	Female	%	Total	%
6 th	58	35.2	107	64.8	165	55.7
7 th	61	46.6	70	53.4	131	44.3
Total	119	40.2	177	59.8	296	100

Table 4 contains the frequencies and percentages for the participants by grade level and program placement. The 6th grade test group was comprised mostly of typical students (109). Fifty-six were classified as intellectually gifted. Similarly, there were a larger number of 7th grade typical respondents (101) and 30 intellectually gifted students.

Table 4

<i>Frequencies and Percentages of Participants by Grade Level and Program Placement (IG or T)</i>						
Grade Level	IG	%	T	%	Total	%
6 th	56	65.1	109	34.9	165	55.7
7 th	30	34.9	101	65.1	131	44.3
Total	86	29.1	210	70.9	296	100

The highest attainable score on the CMI-R (Crites & Savickas, 1995a) is 25, while the lowest possible score is 1. The career maturity scores achieved by the male ($n = 144$) and female ($n = 152$) participants ranged from 7 to 21.

The minimum score achieved by the intellectually gifted students ($n = 86$) was 9, as the maximum was 21. The minimum for the typical students ($n = 210$) was slightly lower at 7 and the maximum was 21.

The means and standard deviations for each group are displayed in Table 5. The groups are organized by gender, grade level, and program placement, i.e., intellectually gifted or typical. Students in the intellectually gifted category achieved a mean of 15.80, which was 1.69 higher than students in the typical group.

Table 5

Means and Standard Deviations by Grade Level, Gender, and Program Placement

<i>Grade Level</i>	<i>Gender</i>	<i>Program Placement</i>	<i>n</i>	<i>M</i>	<i>SD</i>
6 th	Male	IG	31	16.45	3.13
		T	52	13.62	3.34
		Total	83	14.67	3.53
	Female	IG	25	15.04	3.05
		T	57	13.98	2.99
		Total	82	14.30	3.03
	Total	IG	56	15.82	3.15
		T	109	13.81	3.15
		Total	165	14.49	3.28
7 th	Male	IG	18	16.17	2.50
		T	43	13.95	2.94
		Total	61	14.61	2.98
	Female	IG	12	15.17	2.82
		T	58	14.81	2.69
		Total	70	14.87	2.70
	Total	IG	30	15.77	2.64
		T	101	14.45	2.82
		Total	131	14.75	2.82
Total	Male	IG	49	16.35	2.89
		T	95	13.77	3.16
		Total	144	14.65	3.30
	Female	IG	37	15.08	2.94
		T	115	14.40	2.86
		Total	152	14.57	2.88
	Total	IG	86	15.80	2.96
		T	210	14.11	3.01
		Total	296	14.60	3.09

(Min. 1, Max 25)

H1: The intellectually gifted students have higher career maturity level scores than those of their typical middle school age peers.

An independent-samples *t*-test was conducted to evaluate whether intellectually gifted students would achieve higher career maturity level scores than their typical middle school age peers. There were significant differences found between the scores attained by the intellectually gifted students and the typical students, $t(294) = 4.40, p = .001$. The 95% confidence interval for the difference in means ranged from .93 to 2.44. The results support Hypothesis 1.

H2: The career maturity level scores of the middle school intellectually gifted students are at or above those of high school students in grades 9 through 12 in the norm population.

A one-sample *t* test was conducted to evaluate whether the intellectually gifted middle school students would attain career maturity scores that were at or above that of the 9th through 12th grade students in the norm sample. The sample mean 15.80 ($SD = 2.96$) was significantly different from 17.52, the accepted mean for the students in the norm sample, $t(85) = -5.39, p = .01$. The effect size *d* of .58 indicates a medium effect size. The results were counter to the prediction made in hypothesis 2, because the middle school intellectually gifted students scored lower than the high school students in the norm sample.

H3: The intellectually gifted females yielded higher career maturity level results than their male counterparts.

An independent-samples *t*-test was utilized to test hypothesis 3 that intellectually gifted females would yield higher career maturity level results than their male

counterparts. Significant differences were found between the intellectually gifted male and female students, $t(84) = 2.00, p = .05$ with the alpha level set at .05. It is noted, however, that the males ($M = 16.35, SD = 2.89$) scored numerically higher than females ($M = 15.08, SD = 2.94$). These results did not support Hypothesis 3.

H4: The career maturity level scores of both groups, intellectually gifted and typical adolescents, increased as the grade level increases.

The independent variable, program placement, was evaluated using a two-way analysis of variance (ANOVA) to determine whether the dependent variable, career maturity, would increase as the grade level increased. The ANOVA was not significant, $F(1,292) = .76, p = .38$. There was a significant main effect on program placement with $p = .001$ and a relatively small eta square, $\eta^2 = .06$. There was not a significant interaction effect on grade level and program placement. The career maturity level increased for students in the typical group from 6th grade to 7th grade. However, the scores of the intellectually students remained constant from the 6th grade ($M = 15.82, SD = 3.15$) to the 7th grade ($M = 15.77, SD = 2.64$). The means for each group are found in table 5. The results of the analysis are presented in Table 6.

Table 6

<i>Hypothesis 4: Univariate Analysis of Variance for Grade Level and Program Placement</i>				
	<i>df</i>	<i>F</i>	<i>p</i>	η^2
IG or T	1	17.7	< .001	.06
Grade Level	1	.54	.46	.002
IG or T * Grade Level	1	.76	.38	.003
Error	292			

CHAPTER V

SUMMARY

The purpose of this study was to determine the level of career-choice readiness of intellectually gifted adolescents based on the construct of career maturity, specifically the affective component, attitudes. The research project was comprised of participants in the 6th and 7th grades. Four comparisons were made: intellectually gifted to typical peers, intellectually gifted middle school to high school students in the norm population, intellectually gifted gender comparisons; and grade level changes in career maturity.

Summary of Major Findings

The following hypotheses were tested in this study:

H1: The intellectually gifted students have higher career maturity level scores than those of their typical middle school age peers.

Hypothesis 1 was supported. There were significant differences found between the scores of the intellectually gifted middle school students and that of their typical middle school age peers. The intellectually gifted students attained higher scores than the typical students. Therefore, the intellectually gifted students are considered to have more mature attitudes than the typical students.

H2: The career maturity level scores of the middle school intellectually gifted students are at or above those of high school students in grades 9 through 12 in the norm population.

Hypothesis 2 was not supported. Although there was a statistically significant difference between the scores of students in the research sample and that of the norm

sample, the scores of the middle school students were lower than those of the high school students.

H3: The intellectually gifted females yielded higher career maturity level results than their male counterparts.

There were significant differences between the career maturity level scores obtained by male and female intellectually gifted participants. Contrary to the stated hypothesis, however, the male participants actually scored higher than the females. Therefore, hypothesis 3 was not supported.

H4: The career maturity level scores of both groups, intellectually gifted and typical adolescents, increased as the grade level increases.

Hypothesis 4 was not supported. There were no significant differences between the grade levels and there was no interaction effect between grade level and program placement. However, there was a significant main effect on program placement, as the intellectually gifted students scored higher than the typical students in both grade levels.

Limitations

When examining the findings of the research project, the following limitations must be considered. Of the 365 intellectually gifted students invited to participate, only 86 returned parental permission forms and completed the assessment. There was also a larger number of 6th grade participants in this group than 7th graders. This limits the researcher's ability to generalize the findings to the entire population of intellectually gifted students and to a specific grade level.

Although the general population of typical students is larger than that of gifted students, there was a substantially higher number of typical respondents than

intellectually gifted. The number of participants, however, was proportional to that of the population of both typical and intellectually gifted middle school students.

The participating school district requires that students classified as 7th graders enroll in *Career Discovery*. This is a course designed to provide students with a series of lessons that gives them insight into various aspects of careers and provides a foundation for making a more realistic career choice. The exposure to the career-related information that participants may have had at the time of data collection could possibly have affected their answer choices. This not only could have affected the scores of the 6th and 7th graders that were assessed, but it could also have impacted the comparison of the tested population to that of the norm population, because the prior knowledge of the norm sample is unknown.

Conclusions

1. Intellectually gifted students have more mature attitudes towards career decision-making than typical middle school students.
2. Intellectually gifted middle school students do not possess attitudes of maturity comparable to that of high school students because intellectually gifted students scored lower.
3. Evidence of differences between the career-choice readiness of intellectually gifted males and females was found, as the males achieved higher scores than females.

Discussion

Extensive research has demonstrated that gifted children are intellectually-capable of working above the average level of achievement and are often competent in multiple disciplines (Colangelo, 2002; Greene, 2002; Marland, 1972; U.S. Department of Education, 1994; Wessel, 1999). It is reasonable to conclude that because of gifted students' exceptional ability to work above average in several areas, many would also be successful in making a number of different career selections in a variety of areas, as well (Berger, 1990; Kelly & Cobb, 1991; Kerr, 1990). Individuals must reach a certain level of readiness before choosing a career path, however (Crites & Savickas, 1995a). This readiness, or career maturity, is based on one's life experiences and exposure to career-related information.

The current study sought to determine whether intellectually gifted adolescents would achieve higher career maturity level scores than their typical peers. An analysis of Hypothesis 1 revealed that there were significant differences found between the two groups. The intellectually gifted students did, indeed, score higher than the typical students. This finding was consistent with the literature that states that intellectually gifted students are able to perform above average and their readiness to make sound, informed career decisions is above that of their peers (Kerr, 1990). Rysiew, Shore, and Leeb (1999) state that multipotentiality in gifted children may cause them to have difficulty in selecting a career, which may result in indecisiveness, a delay in career selection, or they may feel forced to choose a career that is generally encouraged by society. It is essential that individuals reach a certain level of development before being able to effectively plan a career. Those who have not reached that level "are neither

sufficiently mature nor properly disposed to make a realistic choice” (Savickas, 2000, p. 429). Kerr and Colangelo (1988) suggests that gifted students often express a desire for assistance with career planning, while Savickas (2000) indicates that proceeding with career development activities with students who have not yet developed a capacity to handle them, can result in overwhelming confusion that can lead to the student’s inability to make an appropriate decision. This lends credence to the finding that the intellectually gifted students have more highly developed attitudes regarding careers than their typical peers, as evidenced in their scores. This indicates that the intellectually gifted participants have, at least, a basic understanding of careers, in general (U.S. Department of Education, 1994).

An examination of the second hypothesis was conducted to determine whether the career maturity scores of the middle school intellectually gifted participants in grades 6 and 7 would be at or above those of the high school students in grades 9 through 12 in the norm population. The results of the analysis did not support this hypothesis. The intellectually gifted students’ scores were below that of the students in the norm sample. Although the mean for the intellectually gifted students was above the mean for typical students in the same grades, 6 and 7, as found in the results of hypothesis one, their career maturity level was not as high as that of the high school students in the norm sample. The findings differed from that which was recorded in a study conducted by Kelly and Cobb (1991) which state that adolescent gifted students, specifically ages 11 to 14, possessed advanced career-planning skills typical of students a number of years older. However, because this study solely examined the construct of career maturity, the amount

of career-related information and planning skills that individuals had already received could not be determined.

Many of the items on the CMI-R (Crites & Savickas, 1995a) to which participants were asked to respond required that students have a high degree of career-planning skills in order to select the appropriate answer. This was the intentional design by the authors since one's level of career maturity is determined by the number of correct responses (Crites & Savickas, 1995a). Therefore, it is presumed that the higher the score achieved, the greater the individual's readiness to make a realistic career choice (Crites & Savickas, 1995a; Savickas, 1990). The results suggest that the 6th and 7th grade intellectually gifted respondents possess career-planning skills beyond that of the typical middle school students, but not high school students.

Hypothesis 3 investigated whether the intellectually gifted females would yield higher career maturity level results than their male counterparts. There was a significant difference found between the genders, and the males in both grades actually scored higher than the females. These results were consistent with those noted by Flouri and Buchanan (2002), which found that boys tended to score higher on career maturity than girls in a study of a group of 2,722 adolescents where giftedness was not analyzed in isolation. However, the outcome was counter to the findings by Kelly and Cobb (1991) in which the adolescent gifted females scored higher than the males. Incidentally, the authors did note that the gifted girls were higher in their knowledge of careers, but both groups were on similar level in the area of career planning (Kelly & Cobb, 1991).

The final analysis tested Hypothesis 4 which predicted that the career maturity level scores of both groups, intellectually gifted and typical adolescents, would increase

as the grade level increased. There was no support for this hypothesis. It is important to note, however, that as aforementioned, the intellectually gifted students did score numerically higher than the typical students. In addition, there were no significant differences found among the grade levels when analyzing both groups of, typical and intellectually gifted students, together.

This finding is inconsistent with the design of the CMI-R (Crites and Savickas, 1995a) in which the authors indicate that this level of readiness should increase as one's grade level increases due to the acquisition of new knowledge and career-related exposure (Crites & Savickas, 1995a). Barnes and Carter (2005) noted a similar discovery in which no differences were found between the 9th and 12th graders in their study of students in grades 9 through 12. This finding was considered unusual and was attributed to the composition of the group and the amount of career development the groups had received (Barnes & Carter, 2005). Again, there were no distinctions made between gifted and typical students.

Although the scores of the intellectually gifted students did not increase as the grade level increased, the mean achieved by the intellectually gifted students in the research sample was higher than the norm. This could also be attributed to requirement that the 7th graders in the participating school district enroll in Career Discovery, a course in which students receive instruction on career planning and preparation concepts. It is important to note, however, that only 35% of the tested population of intellectually gifted students consisted of 7th graders. This signifies that the intellectually gifted 6th graders also possess advanced career-planning skills, as they made up the majority of the population of respondents.

Another consideration is of the Mississippi State Department of Education's addition of career exploration activities to the Gifted Education Program Standards (MDE, 2004). Although the requirement was still in the infancy stage at the time of data collection, the participants could have begun receiving career-related instruction at earlier stages than their typical peers which would account for the attainment of higher scores.

The results also indicate that the intellectually gifted students in the research sample are prepared for the next phase of career planning and exploration. Students are ready to begin receiving more detailed information, such as written documents that provide in- depth knowledge regarding specific careers and the requirements necessary to enter various fields. This process can be implemented two-fold, by an experienced career counselor that is familiar with the differentiated needs of intellectually gifted students, as well as the teacher of the gifted who can incorporate career-related information across multiple disciplines during the units regularly covered in class.

The theories which provided the basis for this research project were Parsons' Trait and Factor Theory (1909) and Super's Career Development Theory (1957). Parsons' (1909) theory held that in order for one to be prepared to make a career decision early, the person must be exposed to a series of planned activities that are structured to the needs of the individual. Given the requirement that 7th graders in the participating state enroll in the Career Discovery course and the new state regulations that encourage school districts to enhance gifted programming standards to reach a higher level, the need for well-organized and strategically- planned activities is clearly demonstrated.

Curricular units should be developed for all students that include differentiated, grade-specific lessons. The lessons must be intentionally designed to vary in depth and

breadth not only between grade levels, but also between students in the gifted and typical populations. Having students to engage in activities that build on one another helps students to understand the interrelated ideas within the units and to recognize the connections between concepts covered in school and the skills and abilities need to be successful in the world of work.

The effective implementation of these experiences leads to the key component of Super's Career Development Theory (1957), which is career maturity. Super's (1957) theory states that individuals mature due to a number of factors, including socioeconomic level, daily acquisition of new information, and mental and/or physical abilities. Evidence of this was seen in the analysis of the career maturity scores of the intellectually gifted and typical students. The higher career maturity level attained by the intellectually gifted students and the broad range of scores within both groups demonstrates the students' ability to learn and mature over time.

Utilizing both Parsons' (1909) and Super's (1957) theories in tandem enables students to enhance their career planning skills. This will assist students in making logical career-related decisions earlier and will give them a firm foundation regarding occupational concepts. If an individual finds that a career choice must be altered, then modification of one's plan is made easier because the students have been instructed using a thorough, comprehensive approach, rather than by having students attempt to connect isolated concepts that lack structure and organization.

Recommendations for Research and Practice

The following recommendations for research and practice were ascertained based on the findings of this study.

Recommendations for Future Research

- Most of the current research in which the CMI-R (Crites & Savickas, 1995b) was utilized assessed the career maturity level of typical students. The results of this project demonstrate the need for additional studies that replicate the use of the CMI-R (Crites & Savickas, 1995b) with intellectually gifted students. This would increase the pool of research available for both groups, but especially for intellectually gifted students, in which the empirical research is limited.
- Researchers should conduct new studies that use the CMI-R (Crites & Savickas, 1995b) at different middle school grade levels, specifically grades 5 – 8, because most of the grade level research that has been conducted has been with students in grades 9 - 12. Because adolescents are at the beginning of their career development, additional research with students currently enrolled in these grade levels will provide newly updated reliability and validity data to further support the use of the CMI-R (Crites & Savickas, 1995b) with younger students.
- The CMI-R (Crites & Savickas, 1995b) should be used to conduct both quantitative and qualitative research projects, such as the use of the instrument as a teaching tool. For example, the CMI-R (Crites & Savickas, 1995b) may be used in a pre-post assessment format. The questions may be used as a springboard for discussions regarding specifics aspects of careers between assessments.
- The need for new assessments that focus on the construct of career maturity and address specific areas of career development at different grade levels is needed. Many of the inventories that assess career maturity have been discontinued. The results of this project indicate the importance of addressing this facet of career

planning and preparation. However, many of the available instruments either address career maturity independently, but with limited useability with younger students, or it is a component that is not a part of career development assessment that many career counselors use.

- Replication studies should be conducted to compare intellectually gifted students in different cultural groups and in different regions of the United States.

Recommendations for Practice

- Classroom teachers should provide students with exposure to career-related information at early ages and grade levels, even as early as kindergarten or 1st grade. Activities such as role-playing and dressing in the attire for a specific profession will peak the interest and curiosity of students in early grades and provide a basis for discussion of the world of work.
- Teachers and counselors should guide students in upper elementary grades, 4th and 5th, and middle school grades, 6th through 8th, through career development tasks using career portfolios. This process enables students to build a thorough source of reference that they enhance over time.
- Teachers of the gifted could include as many hands-on workforce experiences as possible for students as they study careers.
- Mentoring programs should be established for students at different ages. School personnel may solicit professionals from local businesses to mentor small groups of 4 to 5 students and provide job shadowing opportunities for high school age students.

- Schools should establish comprehensive schoolwide career development programs at each grade level throughout the district so that if students move from one school within the district to another, their acquisition of career information would continue.
- Teachers should relate daily classroom activities to adult work life. For example, relationships can be drawn between math concepts such as measurement to acquiring a job as a chef or background information on civics as it relates to becoming a city planner or civil engineer.
- Teachers of the gifted use the NCDA Guidelines (1997) to plan differentiated instructional activities for intellectually gifted students that are above the level of their peers, particularly in the state of Mississippi in which the Regulations for the Gifted Education Programs states that curricula for intellectually gifted students should be “different from and in addition to the regular curriculum.”
- School districts could collaborate with local businesses and organizations to host career programs, such as Career Day, community volunteer projects, and involve students in the planning phase of the program.

Activities that focus on the use of interest inventories, surveys, personality assessments, and even computer-based programs are used to as the primary means to explore the world of careers. The construct of career maturity, however, often receives the least amount of consideration when determining an individual's career readiness. The findings of this research project clearly demonstrate the need and importance of utilizing career maturity as a tool to determine, not only one's knowledge of the world of work, but more importantly, where one should begin the career exploration phase.

Students need to be taught to recognize and utilize resources that are available that help them to seek information about specific careers and the skills needed to attain them. Assessments such as the CMI-R (Crites & Savickas, 1995b) may be used to determine students' individual level of readiness to access new information, as well as assisting them in knowing when it is appropriate to complete additional assessments such as interest inventories or aptitude tests.

Having a broad array of knowledge about the world of work for students who are multipotential will allow students to realize that the combination of the many areas in which they are highly skilled may be necessary for them to be successful in a specific career. Learning to identify the skills that will be beneficial to them in the future and honing those skills over time may even assist intellectually gifted students in formulating new careers that have not yet been created.

At the opposite end of the spectrum, however, students who are not multipotential and who find that they have a low level of career maturity may need to focus on only one aspect of career education at a time. Many students, both gifted and typical, are unable to handle several components of an area at once. With this in mind, it is essential that career educators clearly identify each individual's level of readiness and plan activities accordingly. This will prevent students from being overwhelmed with information that they are not yet capable of comprehending.

Designing curricula that is different from that which is taught in the regular classroom is a standard requirement for students who are identified as intellectually gifted. In addition, it is also necessary to design individualized educational activities for gifted students. Being aware of the knowledge level of middle school students who are at

the beginning of the career development process enables the teacher or career counselor to make well-informed decisions about the starting point for each student.

In this study, the intellectually gifted males were found to have higher career maturity scores than the intellectually gifted females. Current research supports higher career maturity levels for both groups. With this in mind, teachers of the gifted and career educators must consider the asynchronous development of gifted students when planning for this population. Because students go in and out of various stages of maturity, the CMI-R can prove to be a very useful tool in assessing students' growth and development at different points during the school year. Career-related learning activities may be modified, extended, or adjusted to meet the needs of the students when necessary.

In addition to lending consideration to curricular design, school districts must implement the activities using the Gifted Education Program Standards (MDE, 2005) to levelize them and evaluate their effectiveness. Schools should work towards constantly improving their gifted programs to reach Level 4, which is the highest level, according to these standards to ensure that intellectually gifted students have access to an adequate amount of career-related information. The ultimate benefit will be to the intellectually gifted students who will have the privilege of receiving a comprehensive program that wholly incorporates aspects of career education into the regular curriculum and programs that are intentionally designed to enrich the programming for gifted students.

APPENDIX A

October 24, 2005

Yolanda Baker Cobb
2813 Jamestown Road
Hattiesburg, MS 39402

Dr. Earl Watkins
Office of the Superintendent
Jackson Public School District
662 S. President Street
Jackson, MS 39201

Dear Dr. Watkins:

I would like to request an opportunity to conduct a research project with select groups of middle school students in the Jackson Public School District. I am a doctoral student at the University of Southern Mississippi, as well as a former teacher of the gifted in JPS. I am currently serving as a school guidance counselor at Thames Elementary School in Hattiesburg, Mississippi.

I would like to assess the groups of gifted and typical students from the following schools: Northwest Jackson Middle School, Whitten Middle School, and Peebles Middle School. Approximately, 240 participants will be solicited for this research project. Sixty intellectually gifted students will be randomly selected from the district's school-based gifted program at each grade level, 6th and 7th. Sixty typical middle school students will be randomly selected from the pool of students enrolled in regular English classes at each grade level, 6th and 7th.

I would like for you to consider the week of January 9-13, 2006 as the prospective dates for the administration of the assessment. Pending your approval, I will contact the principals of the aforementioned schools to schedule specific dates and times for data collection.

The focus of the study is to compare the career maturity levels of intellectually gifted middle school students to that of typical middle and high school students. *Career maturity* refers to the student's ability and readiness to choose a career. It is hypothesized that the career maturity levels of middle school gifted students will be at or above that of high school students.

Students will complete the Career Maturity Inventory-Revised, which takes approximately 45 minutes. Results of the assessment will be shared with students and teachers approximately two weeks after administration. When data are reported, no

names will be used. Each student will be assigned a specific number, so that individual results will remain anonymous.

Participation in this study is completely voluntary. He/she may withdraw from the research project at any time. There will be no cost to or compensation for the students, teachers, or school district. This information will be clearly communicated to the parents and students prior to the test administration.

This project has been reviewed by the Human Subjects Protection Review Committee, which ensures that research projects involving human subjects follow federal regulations. Any questions or concerns about rights as a research subject should be directed to the chair of the Institutional Review Board, The University of Southern Mississippi, 118 College Drive #5147, Hattiesburg, MS 39406-0001, (601) 266-6820.

For specific questions regarding the research project, I may be contacted by phone at (601) 264-4647 or e-mail at MaYoCobb2@msn.com or by mail at 2813 Jamestown Road Hattiesburg, MS 39402.

Thank you, in advance, for your consideration of this project. Our combined efforts will offer much-needed information to the body of research regarding intellectually gifted students. It will also provide valuable insight into the future career endeavors of the middle school students in Jackson Public School District.

Sincerely,

Yolanda Baker Cobb
Doctoral Student
University of Southern Mississippi

cc: Randy Bernamonti, Asst. Superintendent of Middle Schools
Tawanda Nichols, Gifted Coordinator, Open Doors Program

Enclosures: Parental Consent Form
Student Assent Form

APPENDIX B

January 10, 2006

Yolanda Baker Cobb
2813 Jamestown Road
Hattiesburg, MS 39402

Dr. Willie Johnson, Director
Jackson Public School District
Office of Accountability & Research
P.O. Box 2338
662 S. President Street
Jackson, MS 39225-2338

Dear Dr. Johnson:

I would like to request an opportunity to conduct a research project with select groups of middle school students in the Jackson Public School District. I am a doctoral student at the University of Southern Mississippi, as well as a former teacher of the gifted in JPS. I am currently serving as a school guidance counselor at Thames Elementary School in Hattiesburg, Mississippi.

Requests for permission to conduct this study have been sent to the Superintendent, Assistant Superintendent of Middle Schools, and the Gifted Coordinator. I have since been directed to submit a letter of request to your office for approval on behalf of Jackson Public School District.

I would like to assess the groups of gifted and typical students from the following schools: Northwest Jackson Middle School, Whitten Middle School, and Peeples Middle School. Approximately, 240 participants will be solicited for this research project. Sixty intellectually gifted students will be randomly selected from the district's school-based gifted program at each grade level, 6th and 7th. Sixty typical middle school students will be randomly selected from the pool of students enrolled in regular English classes at each grade level, 6th and 7th.

I would like for you to consider the week of February 20-24, 2006 or February 27-March 3, 2006 as the prospective dates for the administration of the assessment. Pending your approval, I will contact the principals of the aforementioned schools to schedule specific dates and times for data collection.

The focus of the study is to compare the career maturity levels of intellectually gifted middle school students to that of typical middle and high school students. *Career maturity* refers to the student's ability and readiness to choose a career. It is hypothesized

that the career maturity levels of middle school gifted students will be at or above that of high school students.

Students will complete the Career Maturity Inventory-Revised, which takes approximately 45 minutes. Results of the assessment will be shared with students and teachers approximately two weeks after administration. When data are reported, no names will be used. Each student will be assigned a specific number, so that individual results will remain anonymous.

Participation in this study is completely voluntary. He/she may withdraw from the research project at any time. There will be no cost to or compensation for the students, teachers, or school district. This information will be clearly communicated to the parents and students prior to the test administration.

This project has been reviewed by the Human Subjects Protection Review Committee, which ensures that research projects involving human subjects follow federal regulations. Any questions or concerns about rights as a research subject should be directed to the chair of the Institutional Review Board, The University of Southern Mississippi, 118 College Drive #5147, Hattiesburg, MS 39406-0001, (601) 266-6820.

For specific questions regarding the research project, I may be contacted by phone at (601) 264-4647 or e-mail at MaYoCobb2@msn.com or by mail at 2813 Jamestown Road Hattiesburg, MS 39402.

Thank you, in advance, for your consideration of this project. Our combined efforts will offer much-needed information to the body of research regarding intellectually gifted students. It will also provide valuable insight into the future career endeavors of the middle school students in Jackson Public School District.

Sincerely,

Yolanda Baker Cobb
Doctoral Student
University of Southern Mississippi

cc: Dr. Earl Watkins, Superintendent of Schools
 Randy Bernamonti, Asst. Superintendent of Middle Schools
 Tawanda Nichols, Gifted Coordinator, Open Doors Program

Enclosures: Parental Consent Form
 Student Assent Form

APPENDIX C

Approval from USM-IRB



The University of
Southern Mississippi

Institutional Review Board

118 College Drive #5147
Hattiesburg, MS 39406-0001
Tel: 601-266-6820
Fax: 601-266-5509
www.usm.edu/irb

HUMAN SUBJECTS PROTECTION REVIEW COMMITTEE NOTICE OF COMMITTEE ACTION

The project has been reviewed by The University of Southern Mississippi Human Subjects Protection Review Committee in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services (45 CFR Part 46), and university guidelines to ensure adherence to the following criteria:

- The risks to subjects are minimized.
 - The risks to subjects are reasonable in relation to the anticipated benefits.
 - The selection of subjects is equitable.
 - Informed consent is adequate and appropriately documented.
 - Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
 - Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
 - Appropriate additional safeguards have been included to protect vulnerable subjects.
 - Any unanticipated, serious, or continuing problems encountered regarding risks to subjects must be reported immediately, but not later than 10 days following the event. This should be reported to the IRB Office via the "Adverse Effect Report Form".
 - If approved, the maximum period of approval is limited to twelve months.
- Projects that exceed this period must submit an application for renewal or continuation.

PROTOCOL NUMBER: 26042704

PROJECT TITLE: **An Analysis of the Career Maturity Levels of Intellectually Gifted Adolescents**

PROPOSED PROJECT DATES: 01/10/06 to 12/15/06

PROJECT TYPE: **Dissertation or Thesis**

PRINCIPAL INVESTIGATORS: Yolanda Baker Cobb

COLLEGE/DIVISION: **College of Education & Psychology**

DEPARTMENT: **Curriculum, Instruction, & Special Education**

FUNDING AGENCY: N/A

HSPRC COMMITTEE ACTION: **Expedited Review Approval**

PERIOD OF APPROVAL: 03/06/07 to 03/05/08

Lawrence A. Hosman
Lawrence A. Hosman, Ph.D.
HSPRC Chair

3-8-07

Date

APPENDIX D

Parent Consent Form

Dear Parent or Guardian,

This form is to request your permission to allow your child to participate in a research project. The study will be conducted by Yolanda Cobb, a doctoral student, majoring in Special Education with an emphasis in Gifted Education at the University of Southern Mississippi. The purpose of this project is to partially fulfill the requirement of a doctoral dissertation. Your child's school district has already approved the implementation of this project for students in the 6th and 7th grades.

The focus of this study is to compare the career maturity levels of gifted and talented middle school students to that of typical middle and high school students. Career maturity is the student's ability to and readiness to choose a career.

Students will complete the Career Maturity Inventory, which takes about 45 minutes. When data are reported, no names will be used. Each student will be assigned a specific number, so that individual results will remain anonymous.

Your child's participation in this study is completely voluntary. He/she may withdraw from the research project at any time. There is no cost to or compensation for the students, teachers, or the school district. This information will be clearly communicated to the students prior to the test administration.

This project has been reviewed by the Human Subjects Protection Review Committee, which ensures that research projects involving human subjects follow federal regulations. Any questions or concerns about rights as a research subject should be directed to the chair of the Institutional Review Board, The University of Southern Mississippi, 118 College Drive #5147, Hattiesburg, MS 39406-0001, (601) 266-6820.

Thank you, in advance for your consideration. Your child's participation in this study will be greatly appreciated.

Sincerely,

Yolanda Cobb

☐ I grant my permission for my child to participate in this study.

☐ I would not like for my child to participate in this study.

Parent Signature _____

Date _____

Student Name _____

School _____

APPENDIX E

Student Assent Form

Dear Student,

This is to request your participation in a research project that examines the career maturity levels of gifted and talented middle school students as compared to that of typical middle and high school students. The study will be conducted by a Yolanda Cobb, a doctoral student at the University of Southern Mississippi.

Your participation in this study is completely voluntary. You may withdraw from the project at any time. The information you provide will be kept confidential. Your results will be provided using a case-sensitive number assigned to you. You will receive your results in approximately two weeks.

Please select one of the options below:

- ☐ I am willing to participate in this research project.
- ☐ I would not like to participate in this research project.

Student Signature _____

Date _____

School Name _____

Grade _____

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1990 in Cincinnati, Ohio.

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Educational Background

University of Southern Mississippi *August 2000 – May 2008*

Hattiesburg, Mississippi

Major: Curriculum, Instruction, and Special Education

Emphasis: Gifted Education

Degree Earned: Doctorate of Philosophy in Education

Mississippi College

June 2000 – August 2000

Clinton, Mississippi

Major: Gifted Education

Credentials Earned: Certification in Gifted Education

Licensure: Gifted Education K – 12 valid until 2012

Jackson State University

August 1996 – May 1999

Jackson, Mississippi

Major: Guidance and Counseling

Emphasis: School Counseling

Degree Received: Master of Science in Education

Licensure: School Guidance and Counseling valid until 2012

Jackson State University

August 1993 – May 1996

Jackson, Mississippi

Major: Elementary Education

Emphasis: Fine Arts and Social Studies

Degree Received: Bachelor of Science in Education

Licensure: Elementary Education K – 3 and 4 – 8 valid until 2012

Tougaloo College

August 1991 – May 1993

Tougaloo, Mississippi

Major: Elementary Education

Degree Status: Transferred to Jackson State University

Employment History

August 2004 – Present

Hattiesburg Public School District
Hattiesburg, Mississippi

Thames Elementary School

Position: School Guidance Counselor (K – 6)

Duties: Conduct individual and small group counseling sessions; organize Life Skills groups; teach character education classes; serve on the Positive Behavior Support Committee and organize activities and incentives for teachers and students; serve on the Leadership Team and the Teacher Support Team; and facilitate workshops on discipline and support strategies for students in poverty for the school and district.

Supervisor(s): Carrie Hornsby, Principal; Lakeisha Stokes, Assistant Principal

July 2003 – May 2004

Laurel School District
Laurel, Mississippi

Oak Park Elementary Magnet School

Position: School Guidance Counselor (K – 6)

Duties: Conducted individual and group counseling sessions; taught character education lessons in whole-class settings; served as Teacher Support Team chairperson, Local Survey Committee Chairperson; facilitated professional development workshops for faculty and staff.

Supervisor(s): Rosemary Harris, Co-Principal; Elaine Read, Co-Principal

August 2002 – July 2003

University of Southern Mississippi
Hattiesburg, Mississippi

The Frances A. Karnes Center for Gifted Studies

Position: Doctoral Student/Research Assistant

Duties: Conducted research on various aspects of gifted education; served as a research assistant and writer on a research project analyzing culturally diverse gifted children; served on grantwriting team to write grants that ranged from \$15,000 to \$200,000; assisted in planning and organizing conferences; supervised teachers in Saturday and summer programs for gifted students; designed website for the center.

Supervisor(s): Dr. Frances Karnes

June 2002 – August 2002

University of Southern Mississippi
Hattiesburg, Mississippi

The Frances A. Karnes Center for Gifted Studies

Position: Administrative Intern

Duties: Supervised and evaluated teachers during the Leadership Studies Program, the Summer Gifted Studies Program, and the Summer Program for Academically Talented Youth; evaluated lesson/unit plans for teachers in each program.

Supervisor(s): Dr. Frances Karnes

Employment History

August 2001 – December 2001

**University of Southern Mississippi
Hattiesburg, Mississippi**

The Frances A. Karnes Center for Gifted Studies

Position: Teaching Intern in Gifted Education

Duties: Planned and taught lessons for undergraduate and graduate students enrolled in SPE 460/560-Characteristics of Gifted Students.

Supervisor(s): Dr. Frances Karnes

August 2000 – May 2002

**Jackson Public School District
Jackson, Mississippi**

John Hopkins Elementary School & Poindexter Elementary School

Position: Teacher of the Gifted (K – 5)

Duties: Implemented the standards as outlined in the curriculum for intellectually gifted students; wrote and implemented curricular units for program participants; screened potentially gifted students for program participation; served as liaison between parents and teachers to effectively meet the needs of gifted students.

Supervisor(s): Ollie Gentry, Principal; Dr. Rosie Payton, Principal; Jane Everly, Gifted Coordinator

August 1997 – May 2000

**Jackson Public School District
Jackson, Mississippi**

Poindexter Elementary School

Position: 3rd Grade Teacher

Duties: Taught all major disciplines; served on various committees; served as team leader; wrote and received 3 classroom mini-grants to implement projects for the third grade team.

August 1995 – May 1998

**Tougaloo College
Tougaloo, Mississippi**

Berkshire Cottage

Position: Residence Hall Director

Duties: Monitored the upperclass girls' dormitory. Organized and planned monthly meetings and activities for the students; greeted and directed visitors to appropriate meeting areas; intervened and mediated in conflicts amongst the residents.

Supervisor(s): Tim Rush

Honors and Awards

- ❖ Selected as a United States Delegate to Beijing, China for the U.S.-China Joint Education Conference to represent School Counselors in America with the People to People Ambassador Program (2006)
- ❖ Graduate Tuition Waiver—University of Southern Mississippi (2002-2003)
- ❖ Recipient of the Frances A. Karnes Scholarship (2002)
- ❖ Recipient of the Christopher J. Karnes Scholarship (2001)
- ❖ Recipient of Five Education Foundation Trust Mini-Grants (1999-2001)
- ❖ “Beyond the Call of Duty” Award Recipient at Poindexter Elementary (1999)
- ❖ “Beyond the Call of Duty” Award Nominee for Jackson Public Schools (1999)
- ❖ Perfect Attendance Award for Teachers at Poindexter Elementary School (1999)
- ❖ Recipient of the Dessie C. Newton Scholarship (1995)
- ❖ Graduated from High School One Year Early (1991)
- ❖ Participant in Tougaloo College’s Early Entrant Program (1991)

Professional Publications

- Bisland, A., Karnes, F.A., & Cobb, Y.B. (2004). Leadership education: Resources and web sites for teachers of gifted students. *Gifted Child Today*, 27(1), 50-56.
- Cobb, Y.B., Shaughnessy, S.E., & F.A. Karnes (In press). Identifying Potentially Gifted Native American Students using Nonverbal Measures of Intelligence, *Journal of Native American History*.
- Karnes, F.A., Shaunnessy, E. & Cobb, Y.B. (2003). *Best practices: A manual for identifying and serving culturally diverse gifted students*. The Frances A. Karnes Center for Gifted Studies. Federal Grant project funded by the U.S. Department of Education.
- Shaughnessy, E., Karnes, F.A., & Cobb, Y.B. (2004). Assessing potentially gifted students from lower socioeconomic status with non-verbal measures of intelligence. *Perceptual and Motor Skills*, 98(2).
- Shaughnessy, E., Karnes, F.A., & Cobb, Y.B. (2004). Assessing culturally diverse potentially gifted students using nonverbal measures of intelligence. *The School Psychologist*, 58(3).

Grants Received

(2001) "Art Smart" Grant to purchase an Art Curriculum for use with gifted and talented students in grades K-5	\$1,000
(2001) Gifted and Talented Resource Room Grant-used to purchase a collection of books and other resources that were made available for gifted students and parents to checkout	\$500
(2001) Learning Style Software Grant	\$83.94
(1999) Literacy Technology Grant	\$323.88
(1999) Math Technology Grant	\$467.82

Professional Responsibilities

- ❖ Positive Behavior Support Team Member (2006-Present)
- ❖ Student Council Advisor (2004-Present)
- ❖ Teacher Support Team Member (2004-Present)
- ❖ Teacher Support Team Chairperson (2003-2004)
- ❖ Beta Club Chairperson (2003-2004)
- ❖ Local Survey Committee Chairperson (2003-2004)
- ❖ Student Teacher Supervisor (Spring 2004)
- ❖ Team Leader (1998-2000)
- ❖ Case Manager for the Teacher Support Team (1999)
- ❖ Fall Carnival Chairperson (1999-2000)
- ❖ Field Day Chairperson (1999-2000)
- ❖ Cultural Fair Chairperson (1999-2000)
- ❖ Co-supervised the Student Teaching Experience of a Japanese Exchange Student (1999)
- ❖ Site Council Secretary (1998-1999)
- ❖ SACS Committee Curriculum and Instruction Chairperson (1998-1999)

Professional Presentations

- ❖ *Counseling Gifted Students*-Pine Belt Gifted Association (2007)
- ❖ *A Framework for Understanding Poverty*-District Presenter of the Ruby Payne Model (2006-2007)
- ❖ *Positive Behavior Support*-Thames Elementary School (2006-2007)
- ❖ *Hot Topics in Counseling*-Hattiesburg Public School District (2006-2007)
- ❖ *Schoolwide Discipline*-Thames Elementary School (2005)
- ❖ *Bully-Safe USA Institute* Participant and Presenter-Gulfport, MS (2003-2004)
- ❖ *The Teacher Support Team Process*-Oak Park Elementary, Laurel, MS (2003-2004)
- ❖ *Test Security Faculty and Staff Training* HPSPD (2006-2007) and LSD (2003-2004)
- ❖ *Best Practices for Teaching Culturally Diverse Gifted Children*-Earl Travillion Elementary School & Lopez Elementary School (2003)

- ❖ *Characteristics and Instructional Strategies for Gifted Students in Traditional Classrooms*-Co-presenter for the Mississippi Private School Association Conference (2002)
- ❖ *Nurturing Creativity in Your Gifted Child*-Parenting Gifted Children's Conference-University of Southern Mississippi (2002)
- ❖ *Multiple Intelligences*- Parenting Gifted Children's Conference & SPE 460/560 Classroom Presentation University of Southern Mississippi (2002)
- ❖ *Learning Styles and the Gifted Child*-Mississippi Association of Gifted Children's Conference (2001)
- ❖ *Learning Styles and the Gifted Child*- Parenting Gifted Children's Conference-University of Southern Mississippi (2001)
- ❖ *Computers in Education Workshop*- Co-Facilitator at Poindexter Elementary & Isabel Elementary School, Jackson Public School District (2001)
- ❖ *New Innovations in Reading*-Co-presenter at Jackson State University (1998)
- ❖ Mississippi Science Teachers' Institute Participant and Presenter for the Mississippi Science Teachers' Association Conference (1998)

Honor Society Memberships

- ❖ Phi Kappa Phi National Honor Society
- ❖ Kappa Delta Pi National Honor Society
- ❖ Alpha Chi National Honor Society
- ❖ The National Scholars Honor Society

Professional Memberships

- ❖ People to People International Alumni Association (PTPA)
- ❖ Mississippi Association of Gifted Children(MAGC)
- ❖ National Association of Gifted Children (NAGC)
- ❖ Mississippi Educational Computing Association (MECA)
- ❖ American Counseling Association (APA)
- ❖ Mississippi Counseling Association (MCA)
- ❖ Mississippi Science Teachers' Association (MSTA)
- ❖ National Science Teachers' Association (NSTA)